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PUBLICATIONS BY THE BUREAU OF STANDARDS ON
CEMENT, CONCRETE, REINFORCED CONCRETE, STUCCO,
MAGNESITE, BUILDING STONE AND RELATED SUBJECTS.

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T e c h n o l o g i c P a p e r s

Number	Title	Price
**T 2	The Strength of Reinforced Concrete Beams - Results of Tests of 333 Beams (First Series) - Richard L. Humphrey and Louis H. Losse. June 27, 1911 - 200 pages	50¢
**T 3	Tests of the Absorptive and Permeable Properties of Portland Cement Mortars, and concretes, Together with Tests of Damp-proofing and Waterproofing Compounds and Materials - Rudolph J. Wig and P. H. Bates. August 22, 1911 - 127 pages	20¢
**T 5	The Effect of High-Pressure Steam on the Crushing Strength of Portland Cement Mortar and Concrete - Rudolph J. Wig. Sept. 5, 1911 - 25 pages	25¢
T 12	Action of the Salts in Alkali Water and Sea Water on Cement - P. H. Bates, A. J. Phillips and Rudolph J. Wig. Nov. 1, 1912 - 157 pages	25¢
T 18	Electrolysis in Concrete - E. B. Rosa, Burton McCollum and O. S. Peters. March 19, 1913 - 137 pages	35¢
**T 29	Variation in Results of Sieving with Standard Cement Sieves - R. J. Wig and J. C. Pearson. August 1, 1913 - 16 pages	5¢
T 42	Standardization of No. 200 Cement Sieves - R. J. Wig and J. C. Pearson. July 30, 1914 - 50 pages	10¢

T 43	Hydration of Portland Cement - A. A. Klein and A. J. Phillips. April 18, 1914 - 71 pages	20¢
**T 44	Investigation of the Durability of Cement Drain Tile in Alkali Soils - R. J. Wig and G. M. Williams (with S. H. McGrory, E. C. Bebb, and L. R. Ferguson). July 22, 1915 - 56 pages - superseded by T95	
T 47	Value of the High Pressure Steam Tests of Portland Cement - Rudolph J. Wig and H. A. Davis. August 18, 1915 - 34 pages	15¢
**T 48	An Air Analyzer for Determining the Fineness of Cement - J. C. Pearson and W. H. Sligh. Sept. 8, 1915 - 74 pages	20¢
T 58	Strength and Other Properties of Concretes as Affected by Materials and Methods of Preparation - R. J. Wig, G. M. Williams and E. R. Gates.- June 20, 1916 - 172 pages	35¢
T 70	Durability of Stucco and Plaster Construction - R. J. Wig, J. C. Pearson and W. E. Emley. Jan. 31, 1917 - 74 pages	15¢
T 78	Properties of the Calcium Silicates and Calcium Aluminate Occurring in Normal Portland Cement - P. H. Bates, and A. A. Klein. June 9, 1917 - 38 pages	25¢
T 95	Durability of Cement Drain Tile and Concrete in Alkali Soils - R. J. Wig, G. M. Williams and A. W. Finn, in co-operation with S. H. McGrory, E. C. Bebb and L. R. Ferguson. Nov. 15, 1917 - 94 pages	35¢
T 102	The Properties of Portland Cement Having a High Magnesia Content - P. H. Bates. January 19, 1918 - 42 pages	15¢
T 123	Physical and Chemical Tests of the Commercial Marbles of the United States - D. W. Kessler. July 15, 1919 - 54 pages	15¢
T 173	Tests of Bond Resistance Between Concrete and Steel - W. A. Slater, F. E. Richart and G. G. Scofield. Nov. 1, 1920 - 66 pages	25¢
T 174	Effect of Col as an Accelerator of the Hardening of Portland Cement Mixtures - Roy N. Young. October 11, 1920 - 24 pages	5¢
T 175	Pouring and Pressure Tests of Concrete - W. A. Slater and A. T. Goldbeck. October 11, 1920 - 13 pages	5¢
T 182	Effect of Repeated Reversals of Stress on Double-reinforced Concrete Beams - W. A. Slater, G. A. Smith and H. P. Mueller. Dec. 20, 1920 51 pages	15¢

T 197	Cementing Qualities of the Calcium Aluminates - P.H.Bates. Sept. 27, 1921 - 27 pages	10¢
T 214	Durability of Cement Drain Tile and Concrete in Alkali Soils: Third Progress Report (1919-20) G. M. Williams. May 20, 1922 - 32 pages	10¢
T 220	Tests of a Hollow Tile and Concrete Floor Slab Reinforced in Two Directions - W. A. Slater, Arthur Hagener and G. P. Anthes. Nov. 15, 1922 - 66 pages	25¢
T 233	Tests of Heavily Reinforced Concrete Slab Beams - W. A. Slater and Fred B. Seely. March 20, 1923 - 47 pages	15¢
T 236	Loading Tests of a Hollow Tile and Reinforced Concrete Floor of Arlington Building, Washington, D. C. - Louis J. Larson and Serge N. Petrenko. April 21, 1923 - 40 pages	15¢
T 239	Tests of Caustic Magnesia Made from Magnesite from Several Sources - P. H. Bates, Roy N. Young and Paul Rapp. Sept. 14, 1923 - 29 pages	10¢
T 248	Exposure Tests on Colorless Waterproofing Materials - D. W. Kessler. January 7, 1924 - 33 pages	15¢

C i r c u l a r s

Number	Title	Price
C 33	United States Government Specifications for Portland Cement (3rd edition) Jan. 18, 1917	10¢
**C 39	Specifications for and Measurement of Standard Sieves (Superceded by LC No. 74 Apr. 15, 1924).	
C 70	Materials for the Household (Non-Technical information on use of cement) Dec. 5, 1917	25¢
C 135	Caustic Magnesia Cement - Oct. 16, 1922	5¢

L e t t e r C i r c u l a r s

LC 42	Acid-Proof Coatings for Concrete Surfaces - Feb. 12, 1923
LC 74	Standard Specifications for Sieves - April 15, 1925

- LC 139 Reports of Service Tests on Concrete Floor Treatments -
 October 28, 1920
- LC 140 Blast Furnace Slag as Concrete Aggregate - Sept. 1921
- LC 141 Inspection of Portland Cement - Sept. 1922
- LC 142 The Principal Requirements of Portland Cement Specifi-
 cations of Various Countries - Aug. 17, 1921

1. The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations

$$\frac{dx}{dt} = f(x, y), \quad \frac{dy}{dt} = g(x, y),$$

where f and g are continuous functions of x and y in a domain D of the xy -plane.

It is shown that if the functions f and g satisfy the conditions of the theorem of existence and uniqueness of solutions, then there exists a unique solution of the system of equations in the domain D .

2.